

FOR 10/553083 by Cynthia Hamilton

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\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/Caplus enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/Caplus enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/Caplus enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	Caplus coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/Caplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/Caplus enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS	29	JAN 02	STN pricing information for 2008 now available
NEWS	30	JAN 16	CAS patent coverage enhanced to include exemplified

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                  prophetic substances  
NEWS 31 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new  
                  custom IPC display formats  
NEWS 32 JAN 28 MARPAT searching enhanced  
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days  
                  of publication  
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment  
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements  
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,  
                  AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

NEWS HOURS      STN Operating Hours Plus Help Desk Availability  
NEWS LOGIN      Welcome Banner and News Items  
NEWS IPC8       For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:59:26 ON 14 FEB 2008

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 14:59:37 ON 14 FEB 2008  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 13 FEB 2008 HIGHEST RN 1003293-96-6  
DICTIONARY FILE UPDATES: 13 FEB 2008 HIGHEST RN 1003293-96-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and

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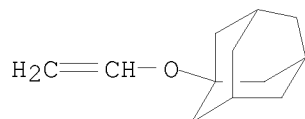
predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> s 42459-51-8
L1 1 42459-51-8
    (42459-51-8/RN)
```

=> d

```
L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN
RN 42459-51-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Tricyclo[3.3.1.13,7]decane, 1-(ethenyloxy)- (CA INDEX NAME)
OTHER NAMES:
CN 1-Adamantyl vinyl ether
MF C12 H18 O
CI COM
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL
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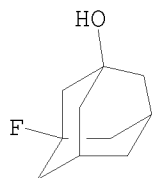
**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

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11 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)
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=> s adamantol
L2 3 ADAMANTOL
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=> d 1-3

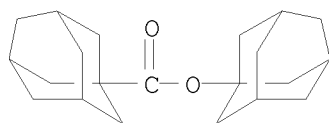
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L2 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2008 ACS on STN
RN 58652-35-0 REGISTRY
ED Entered STN: 16 Nov 1984
CN Tricyclo[3.3.1.13,7]decan-1-ol, 3-fluoro- (CA INDEX NAME)
OTHER NAMES:
CN 3-Fluoro-1-adamantol
CN 3-Fluoroadamantan-1-ol
MF C10 H15 F O
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB,
    USPATFULL
    (*File contains numerically searchable property data)
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\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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10 REFERENCES IN FILE CAPLUS (1907 TO DATE)

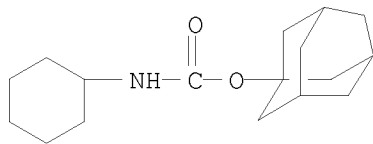
L2 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 16269-10-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid,  
tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
ester (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1-Adamantanecarboxylic acid, 1-adamantyl ester (8CI)  
CN 1-Adamantol, 1-adamantanecarboxylate  
OTHER NAMES:  
CN 1-Adamantyl 1-adamantanecarboxylate  
MF C21 H30 O2  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMCATS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

4 REFERENCES IN FILE CA (1907 TO DATE)  
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 15215-43-7 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Cyclohexanecarbamic acid, 1-adamantyl ester (8CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1-Adamantanol, cyclohexanecarbamate  
CN 1-Adamantol, cyclohexanecarbamate  
MF C17 H27 N O2  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CHEMCATS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> s adamant and ol

4685 ADAMANT

5153545 OL

L3 564 ADAMANT AND OL

=> s 13

4685 ADAMANT

5153545 OL

L4 564 ADAMANT AND OL

=> d 564

L4 ANSWER 564 OF 564 REGISTRY COPYRIGHT 2008 ACS on STN

RN 665-66-7 REGISTRY

ED Entered STN: 16 Nov 1984

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-amine, hydrochloride (1:1) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Adamantanamine, hydrochloride (8CI)

CN Adamantanamine hydrochloride (6CI)

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-amine, hydrochloride (9CI)

OTHER NAMES:

CN 1-Adamantamine hydrochloride

CN 1-Adamantylamine hydrochloride

CN 1-Aminoadamantane hydrochloride

CN Adamantylamine hydrochloride

CN Adamin

CN Adamine

CN Amantadine hydrochloride

CN Amazolon

CN Aminoadamantane hydrochloride

CN EXP 105-1

CN Mantadan

CN Mantadine

CN Mantadix

CN Midantan

CN Midantane

CN Mydantane

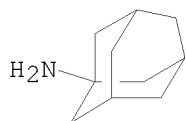
CN NSC 83653

CN Symadine

CN Symmetrel

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CN Virasol  
CN Virofral  
MF C10 H17 N . Cl H  
CI COM  
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*,  
BIOSIS,  
BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN,  
CSCHEM, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IMSRESEARCH, IPA,  
MEDLINE, MRCK\*, PIRA, PROMT, PROUSDDR, PS, RTECS\*, SCISEARCH, SPECINFO,  
TOXCENTER, USAN, USPAT2, USPATFULL, USPATOLD  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
CRN (768-94-5)



● HCl

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

669 REFERENCES IN FILE CA (1907 TO DATE)  
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
671 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
18 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s adamant adj 1 adj ol  
4685 ADAMANT  
184 ADJ  
22654369 1  
184 ADJ  
5153545 OL  
L5 0 ADAMANT ADJ 1 ADJ OL  
(ADAMANT(W) ADJ(W) 1(W) ADJ(W) OL)

=> s adamant and ol  
4685 ADAMANT  
5153545 OL  
L6 564 ADAMANT AND OL

=> s C10H16o/mfw  
'MFW' IS NOT A VALID FIELD CODE  
L7 0 C10H16O/MFW

=> s C10H16o/mf

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L8 5733 C10H16O/MF

=> s 18 and 16

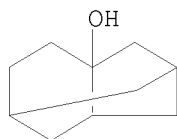
L9 2 L8 AND L6

=> d 1-2

L9 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 96929-65-6 REGISTRY  
ED Entered STN: 01 Jul 1985  
CN 2,5-Methano-1H-inden-7a(2H)-ol, hexahydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 3-Protoadamantyl alcohol  
CN 6-Protoadamantanol  
MF C10 H16 O  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, TOXCENTER  
(\*File contains numerically searchable property data)

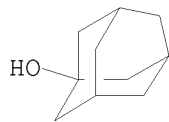


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 768-95-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-ol (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1-Adamantanol (6CI, 7CI, 8CI)  
OTHER NAMES:  
CN 1-Adamantyl alcohol  
CN 1-Hydroxyadamantane  
CN NSC 108837  
CN NSC 91633  
MF C10 H16 O  
CI COM  
LC STN Files: ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM\*, EMBASE, GMELIN\*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, USPATOLD  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*  
(\*Enter CHEMLIST File for up-to-date regulatory information)

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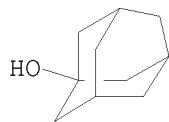
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1644 REFERENCES IN FILE CA (1907 TO DATE)  
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1652 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s 768-95-6  
L10 1 768-95-6  
(768-95-6/RN)

=> d

L10 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS on STN  
RN 768-95-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-ol (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1-Adamantanol (6CI, 7CI, 8CI)  
OTHER NAMES:  
CN 1-Adamantyl alcohol  
CN 1-Hydroxyadamantane  
CN NSC 108837  
CN NSC 91633  
MF C10 H16 O  
CI COM  
LC STN Files: ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,  
CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM\*, EMBASE, GMELIN\*,  
IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS\*, SPECINFO, SYNTHLINE,  
TOXCENTER, USPAT2, USPATFULL, USPATOLD  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1644 REFERENCES IN FILE CA (1907 TO DATE)  
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1652 REFERENCES IN FILE CAPLUS (1907 TO DATE)



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11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	85.71	85.92

FILE 'CAPLUS' ENTERED AT 15:03:21 ON 14 FEB 2008  
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FILE LAST UPDATED: 13 Feb 2008 (20080213/ED)

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=> d his

(FILE 'HOME' ENTERED AT 14:59:26 ON 14 FEB 2008)

FILE 'REGISTRY' ENTERED AT 14:59:37 ON 14 FEB 2008

L1	1 S	42459-51-8
L2	3 S	ADAMANTOL
L3	564 S	ADAMANT AND OL
L4	564 S	L3
L5	0 S	ADAMANT ADJ 1 ADJ OL
L6	564 S	ADAMANT AND OL
L7	0 S	C10H16O/MFW
L8	5733 S	C10H16O/MF
L9	2 S	L8 AND L6
L10	1 S	768-95-6

FILE 'CAPLUS' ENTERED AT 15:03:21 ON 14 FEB 2008

=> s l10 or l1  
1652 L10  
11 L1  
L11 1659 L10 OR L1

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=> s 11

L12 11 L1

=> d all 1-11

L12 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2007:608678 CAPLUS

DN 147:235334

ED Entered STN: 06 Jun 2007

TI An efficient method for the synthesis of enol ethers and enecarbamates.  
Total syntheses of isoindolobenzazepine alkaloids, lennoxamine and  
chilenine

AU Fuwa, Haruhiko; Sasaki, Makoto

CS Laboratory of Biostructural Chemistry, Graduate School of Life Sciences,  
Tohoku University, Sendai, 981-8555, Japan

SO Organic & Biomolecular Chemistry (2007), 5(12), 1849-1853

CODEN: OBCRAK; ISSN: 1477-0520

PB Royal Society of Chemistry

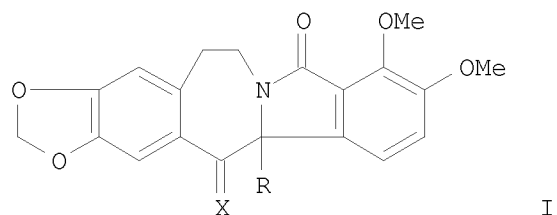
DT Journal

LA English

CC 31-4 (Alkaloids)

OS CASREACT 147:235334

GI



AB An efficient method for the synthesis of enol ethers and enecarbamates  
was

developed and was based on catalytic hydrosilane reduction of

$\alpha$ -phosphonoxy enol ethers and  $\alpha$ -phosphonoxy enecarbamates.

This method was applied to the total syntheses of two  
isoindolobenzazepine  
alkaloids, lennoxamine and chilenine I (R = H, X = H<sub>2</sub>; R = OH, X = O,  
resp.).

ST lennoxamine chilenine isoindolobenzazepine alkaloid total synthesis enol  
ether enecarbamate

IT Ethers, preparation

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(enol; total syntheses of the isoindolobenzazepine alkaloids

( $\pm$ )-lennoxamine and ( $\pm$ )-chilenine via intermediate enol ethers

and enecarbamates)

IT Carbamates

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(total syntheses of the isoindolobenzazepine alkaloids  
(±)-lennoxamine and (±)-chilenine via intermediate enol ethers  
and enecarbamates)

IT Alkaloids, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(total syntheses of the isoindolobenzazepine alkaloids  
(±)-lennoxamine and (±)-chilenine via intermediate enol ethers  
and enecarbamates)

IT 2524-64-3 2861-28-1, 1,3-Benzodioxole-5-acetic acid 22483-09-6  
22635-62-7 26171-78-8 64482-27-5 213921-40-5 945594-59-2  
945594-63-8 945594-69-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(total syntheses of the isoindolobenzazepine alkaloids  
(±)-lennoxamine and (±)-chilenine via intermediate enol ethers  
and enecarbamates)

IT 33100-06-0P 85175-73-1P 344338-21-2P 385390-30-7P 945594-61-6P  
945594-64-9P 945594-66-1P 945594-67-2P 945594-70-7P 945594-73-0P  
945594-74-1P 945594-76-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(total syntheses of the isoindolobenzazepine alkaloids  
(±)-lennoxamine and (±)-chilenine via intermediate enol ethers  
and enecarbamates)

IT 38542-77-7P, (±)-Lennoxamine 42459-51-8P 71700-15-7P,  
(±)-Chilenine 125730-82-7P 945594-60-5P 945594-62-7P  
945594-65-0P 945594-68-3P 945594-71-8P 945594-72-9P 945594-75-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(total syntheses of the isoindolobenzazepine alkaloids  
(±)-lennoxamine and (±)-chilenine via intermediate enol ethers  
and enecarbamates)

RE.CNT 76 THERE ARE 76 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Beletskaya, I; Chem Rev 2000, V100, P3009 CAPLUS
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- (5) Charbonnier, F; J Org Chem 1987, V52, P2303 CAPLUS
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- (7) Comins, D; Org Lett 2005, V7, P95 CAPLUS
- (8) Comins, D; Tetrahedron Lett 1996, V37, P793 CAPLUS
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- (19) Farina, V; J Org Chem 1994, V59, P5905 CAPLUS
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- (22) Fuwa, H; Chem Commun, DOI:10.1039/b704374k 2007
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- (24) Fuwa, H; J Am Chem Soc 2002, V124, P14983 CAPLUS
- (25) Fuwa, H; J Am Chem Soc 2006, V128, P16989 CAPLUS
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L12 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2006:1117842 CAPLUS  
 DN 145:446291  
 ED Entered STN: 26 Oct 2006  
 TI Dry etching-resistant resists having high acid functionality, their additives, and their preparation  
 IN Ito, Hajime; Okada, Yasunari  
 PA Idemitsu Kosan Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 16pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006290799	A	20061026	JP 2005-113790	20050411
PRAI	JP 2005-113790		20050411		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006290799	IPCI	C07C0067-04 [I,A]; C07C0067-10 [I,A]; C07C0067-00 [I,C*]; C07C0069-753 [I,A]; C07C0069-00 [I,C*]; G03F0007-004 [I,A]; C07B0061-00 [N,A]
	IPCR	C07C0067-00 [I,C]; C07C0067-04 [I,A]; C07B0061-00 [N,C]; C07B0061-00 [N,A]; C07C0067-10 [I,A]; C07C0069-00 [I,C]; C07C0069-753 [I,A]; G03F0007-004 [I,C]; G03F0007-004 [I,A]
	FTERM	2H025/AA01; 2H025/AA09; 2H025/AB16; 2H025/AC04; 2H025/AC08; 2H025/AD03; 2H025/BE00; 2H025/BE10; 2H025/BG00; 2H025/CC20; 2H025/FA41; 4H006/AA01; 4H006/AA02; 4H006/AA03; 4H006/AB78; 4H006/AC48; 4H006/BA02; 4H006/BA37; 4H006/BA66; 4H006/BJ30; 4H006/KC20; 4H039/CA66; 4H039/CF10; 4H039/CL25

OS MARPAT 145:446291  
 AB The resists contain Z1[X(CO2Y)m]n (Z1 = alicyclic hydrocarbon; X = bridging group; Y = acid-sensitive alicyclic hydrocarbyl; X and/or Y contain O, N, or S; m, n ≥ 1; m + n ≥ 2), which are prepared by reacting (A) alicyclic hydrocarbon compds. having ≥ 2 carboxyls or their halides with (B) acid-sensitive alicyclic hydrocarbon compds. in the presence of acid or base catalysts. Further claimed are compds. represented by the above Markush structure where Z1 is adamantyl. The compds. show high solvent solubility and good compatibility with resist

base resins.  
 ST dry etching resist additive polycarboxyl alicyclic compd; polycarboxyl adamantane added dry etching resistant resist  
 IT Resists  
 plural (etching; dry etching resists containing adamantane derivs. with carboxyl groups and showing high acid functionality)  
 IT 913063-37-3P 913063-38-4P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (dry etching resists containing adamantane derivs. with plural carboxyl groups and showing high acid functionality)

IT 39269-10-8, 1,3-Adamantanedicarboxylic acid 42459-51-8, 1-Adamantyl vinyl ether 625122-36-3

RL: RCT (Reactant); RACT (Reactant or reagent) (dry etching resists containing adamantane derivs. with plural carboxyl groups and showing high acid functionality)

IT 105-54-4, Ethyl butyrate 84540-57-8, Propylene glycol methyl ether acetate

RL: TEM (Technical or engineered material use); USES (Uses) (resist solvents; dry etching resists containing adamantane derivs. with plural carboxyl groups and showing high acid functionality)

L12 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2005:300741 CAPLUS

DN 142:382171

ED Entered STN: 07 Apr 2005

TI Positive resist composition and resist laminate for low-acceleration electron beam and method of pattern formation

IN Ando, Tomoyuki; Hojo, Takuma

PA Tokyo Ohka Kogyo Co., Ltd., Japan

SO PCT Int. Appl., 63 pp.  
CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM G03F007-039  
ICS G03F007-26; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005031464	A1	20050407	WO 2004-JP8948	20040618
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2005099504	A	20050414	JP 2003-334029	20030925
	JP 2005114919	A	20050428	JP 2003-347136	20031006
	EP 1666971	A1	20060607	EP 2004-746417	20040618
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2006240355	A1	20061026	US 2006-572709	20060317

FOR 10/553083 by Cynthia Hamilton

KR 758870	B1	20070914	KR 2006-705521	20060320
PRAI JP 2003-334029	A	20030925		
JP 2003-347136	A	20031006		
WO 2004-JP8948	W	20040618		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005031464	ICM	G03F007-039
	ICS	G03F007-26; H01L021-027
	IPCI	G03F0007-039 [ICM,7]; G03F0007-26 [ICS,7];
H01L0021-027		[ICS,7]; H01L0021-02 [ICS,7,C*]
	IPCR	G03F0007-039 [I,C*]; G03F0007-039 [I,A]; G03F0007-26 [I,C*]; G03F0007-26 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
	ECLA	G03F007/039C1S
JP 2005099504	IPCR	G03F0007-039 [I,A]; G03F0007-039 [I,C*]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
JP 2005114919	IPCR	G03F0007-039 [I,A]; G03F0007-039 [I,C*]; G03F0007-11 [I,A]; G03F0007-11 [I,C*]; G03F0007-40 [I,A]; G03F0007-40 [I,C*]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
EP 1666971	IPCI	G03F0007-039 [ICM,7]; G03F0007-26 [ICS,7];
H01L0021-027		[ICS,7]; H01L0021-02 [ICS,7,C*]
	IPCR	G03F0007-039 [I,C*]; G03F0007-039 [I,A]; G03F0007-26 [I,C*]; G03F0007-26 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
	ECLA	G03F007/039C1S
US 2006240355	IPCI	G03C0001-00 [I,A]
	IPCR	G03C0001-00 [I,C]; G03C0001-00 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]; G03F0007-09 [N,C*]; G03F0007-09 [N,A]; G03F0007-11 [N,C*]; G03F0007-11 [N,A]; G03F0007-20 [N,C*]; G03F0007-20 [N,A]; G03F0007-26 [I,C*]; G03F0007-26 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
	NCL	430/270.100
	ECLA	G03F007/039C1S; S03F; S03F; S03F
KR 758870	IPCI	G03F0007-039 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]

AB The invention is concerned about a pos. resist composition and resist laminate for low-acceleration electron beams that are of high resolution and excel in dry etching resistance, minimizing film loss and that accordingly can appropriately used in the process for resist pattern formation through the step of exposure to low-acceleration electron beams. The pos. resist composition comprises a resin component (A) having acid-dissociative dissoln. inhibiting groups so as to have an alkali solubility increased by the action of an acid and an acid generator component (B) capable of generating an acid when exposed, wherein the remaining film ratio after alkali development in

the unexposed area of resist film formed from the pos. resist composition for low-acceleration electron beams is 80% or higher. The resist laminate comprises a substrate and, sequentially superimposed thereon, a lower organic film layer capable of dry etching, an interlayer and an upper resist film layer, wherein the upper resist film layer is formed from the above pos. resist composition for low-acceleration electron beams.

ST pos resist compn laminate electron beam pattern formation

IT Positive photoresists  
(pos. resist composition and resist laminate for low-acceleration electron beam pattern formation)

IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pos. resist composition and resist laminate for low-acceleration electron beam pattern formation)

IT 109-92-2DP, Ethyl vinyl ether, reaction products with hydroxystyrene copolymers 722495-59-2DP, ethoxyethyl-protected 722495-60-5DP, ethoxyethyl-protected  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of pos. resist composition for low-acceleration electron beam pattern formation)

IT 24979-70-2D, p-Hydroxystyrene homopolymer, adamantoxyethyl-protected 24979-74-6D, p-Hydroxystyrene-styrene copolymer, adamantoxyethyl-protected 42459-51-8D, reaction products with hydroxystyrene polymers  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(preparation of pos. resist composition for low-acceleration electron beam pattern formation)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Fuji Photo Film Co Ltd; JP 2002341523 A 2002 CAPLUS
- (2) Fuji Photo Film Co Ltd; TW 562999 B 2002 CAPLUS
- (3) Fuji Photo Film Co Ltd; JP 2003177537 A 2003 CAPLUS
- (4) Matsushita Electric Industrial Co Ltd; JP 200412513 A 2004
- (5) Sony Corp; JP 2002373845 A 2002 CAPLUS
- (6) Sumitomo Chemical Co Ltd; WO 0173512 A1 2001 CAPLUS
- (7) Sumitomo Chemical Co Ltd; JP 2001272782 A 2001 CAPLUS
- (8) Sumitomo Chemical Co Ltd; US 2003113661 A1 2001 CAPLUS
- (9) Takao, U; Japanese Journal of Applied Physics, Part 1 1999, 12B, P7046
- (10) Tokyo Ohka Kogyo Co Ltd; JP 04-340553 A 1992 CAPLUS
- (11) Wako Pure Chemical Industries Ltd; JP 06-194842 A 1994 CAPLUS
- (12) Wako Pure Chemical Industries Ltd; EP 588544 A2 1994 CAPLUS

L12 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:965507 CAPLUS

DN 141:417929

ED Entered STN: 12 Nov 2004

TI Positive photoresist composition and method of formation of photoresist



FOR 10/553083 by Cynthia Hamilton

patterns using the same  
IN Hojo, Takuma; Ishikawa, Kiyoshi  
PA Tokyo Ohka Kogyo Co., Ltd., Japan  
SO PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM G03F007-039  
ICS G03F007-004  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004097524	A1	20041111	WO 2004-JP5402	20040415
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2004333549	A	20041125	JP 2003-125242	20030430
	EP 1619553	A1	20060125	EP 2004-727762	20040415
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,				
HR					
	TW 276920	B	20070321	TW 2004-93111275	20040422
	US 2006247346	A1	20061102	US 2005-553083	20051011
PRAI	JP 2003-125242	A	20030430		
	WO 2004-JP5402	W	20040415		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004097524	ICM	G03F007-039
	ICS	G03F007-004
	IPCI	G03F0007-039 [ICM,7]; G03F0007-004 [ICS,7]
	IPCR	C08F0008-00 [I,C*]; C08F0008-00 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
	ECLA	G03F007/039C1S
JP 2004333549	IPCR	G03F0007-039 [I,A]; G03F0007-039 [I,C*]
EP 1619553	IPCI	G03F0007-039 [ICM,7]; G03F0007-004 [ICS,7]
	IPCR	C08F0008-00 [I,C*]; C08F0008-00 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]
	ECLA	G03F007/039C1S
TW 276920	IPCI	G03F0007-039 [I,C]; G03F0007-039 [I,A]
	IPCR	C08F0008-00 [I,C*]; C08F0008-00 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]

FOR 10/553083 by Cynthia Hamilton

US 2006247346 ECLA G03F0007/039C1S  
IPCI C08K0005-41 [I,A]; C08K0005-00 [I,C\*]  
IPCR C08K0005-00 [I,C]; C08K0005-41 [I,A]; C08F0008-00  
[I,C\*]; C08F0008-00 [I,A]; G03F0007-039 [I,C\*];  
G03F0007-039 [I,A]; H01L0021-02 [I,C\*]; H01L0021-027  
[I,A]  
NCL 524/155.000; 524/577.000  
ECLA G03F0007/039C1S

AB The invention provides a pos. photoresist composition which has high etching resistance and attains high resolution and a method of forming patterns by using the resist composition The pos. resist composition contains a resin component (A) which has acid-dissociable dissoln.-inhibiting groups and can be enhanced in the solubility in alkali by the action of an acid and an acid generator component (B) which generates an acid upon exposure, the resin component (A) being a polymer comprising structural units of hydroxyphenylethylenyl group and part of the hydroxyl groups of the units being protected by replacing the hydrogen atoms by acid-dissociable dissoln.-inhibiting groups represented by the general formula -C(R1)(R2)C-O-X wherein R1 is alkyl having 1 to 5 carbon atoms; R2 is alkyl having 1 to 5 carbon atoms or hydrogen; and X is an aliphatic polycyclic group having 10 to 16 carbon atoms or an aromatic polycyclic hydrocarbon group having 10 to 16 carbon atoms.

ST pos photoresist compn polymer  
IT Positive photoresists  
(pos. photoresist composition and method of formation of photoresist patterns using the same)

IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 193222-02-5,  $\alpha$ -(Methylsulfonyloxyimino)-4-methoxyphenylacetonitrile  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid generator; pos. photoresist composition)

IT 24979-70-2D, p-Hydroxystyrene homopolymer, reaction product with 1-Adamantyl vinyl ether 27364-41-6D, reaction product with hydroxystyrenyl polymer 42459-51-8D, 1-Adamantyl vinyl ether, reaction product with hydroxystyrenyl polymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pos. photoresist composition)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Fuji Photo Film Co Ltd; JP 2002139838 A 2002 CAPLUS  
(2) Fuji Photo Film Co Ltd; JP 2002323768 A 2002 CAPLUS  
(3) Fuji Photo Film Co Ltd; JP 2003307840 A 2003 CAPLUS  
(4) Jsr Corp; JP 11-2902 A 1999 CAPLUS  
(5) Jsr Corp; JP 11-30865 A 1999 CAPLUS  
(6) Jsr Corp; JP 2001316418 A 2001 CAPLUS  
(7) Shin-Etsu Chemical Co Ltd; JP 2002234910 A 2002 CAPLUS  
(8) Shipley Co L L C; US 2003232273 A1 2003 CAPLUS  
(9) Shipley Co L L C; JP 2003295444 A 2003 CAPLUS  
(10) Wako Pure Chemical Industries Ltd; JP 08-123032 A 1996 CAPLUS

L12 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2003:585195 CAPLUS  
DN 139:133273

FOR 10/553083 by Cynthia Hamilton

ED Entered STN: 30 Jul 2003  
TI Preparation of (meth)acryloyl-containing adamantane derivatives  
IN Anzai, Ryuichi; Kikuchi, Katsuaki  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C07C067-04  
ICS C07C067-29; C07C069-54; C07C213-08; C07C217-52; C07B061-00  
CC 24-8 (Alicyclic Compounds)  
Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003212823	A	20030730	JP 2002-10155	20020118
	JP 4030313	B2	20080109		
	JP 2007314570	A	20071206	JP 2007-203922	20070806
PRAI	JP 2002-10155	A3	20020118		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003212823	ICM	C07C067-04
	ICS	C07C067-29; C07C069-54; C07C213-08; C07C217-52; C07B061-00
	IPCI	C07C0067-04 [I,A]; C07C0067-29 [I,A]; C07C0067-00 [I,C*]; C07C0069-54 [I,A]; C07C0069-00 [I,C*]; C07C0213-08 [I,A]; C07C0213-00 [I,C*]; C07C0217-52 [I,A]; C07C0217-00 [I,C*]; C07B0061-00 [N,A]
	IPCR	C07C0067-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0067-00 [I,C*]; C07C0067-29 [I,A]; C07C0069-00 [I,C*]; C07C0069-54 [I,A]; C07C0213-00 [I,C*]; C07C0213-08 [I,A]; C07C0217-00 [I,C*]; C07C0217-52 [I,A]
JP 2007314570	IPCI	C07C0067-04 [I,A]; C07C0067-00 [I,C*]; C07C0069-54 [I,A]; C07C0069-00 [I,C*]; C07C0217-52 [I,A]; C07C0217-00 [I,C*]; C07C0213-08 [I,A]; C07C0213-00 [I,C*]; C07B0061-00 [N,A]
	FTERM	4H006/AA02; 4H006/AC48; 4H006/BA11; 4H006/BA13; 4H006/BA37; 4H006/BA52; 4H006/BA66; 4H006/BJ30; 4H006/KA11; 4H039/CA66; 4H039/CF10

OS MARPAT 139:133273

AB CH:CR1CO2CHMeO(CH2)nR2 [I; R1 = H, Me; R2 = (un)substituted adamantyl, adamantanonyl (sic); n = 0-4], useful as materials for drugs, agrochems., polymers, etc., are prepared by treating CH:CR1CO2CH:CH2 (R1 = same as above) with R2(CH2)nOH (R2 = same as above), preferably in the presence of

acid catalysts. Alternatively I are prepared by treating CH:CR1CO2H with R2(CH2)nOH:CH2. A mixture of 1-adamantanol, vinyl acrylate, and Bi(OSO2CF3)3.4H2O was heated at 40° for 8 h to give 53% I (R1 = H, R2 = 1-adamantyl, n = 0).

ST adamantyloxyethyl acrylate prepn; adamantanol addn vinyl acrylate bismuth triflate catalyst; acid catalyst adamantyl vinyl ether addn methacrylic acid

IT Acids, uses

Lewis acids  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of (meth)acryloyl-containing adamantane derivs. from vinyl  
(meth)acrylate and adamantyl alcs. or from (meth)acrylic acid and adamantyl alcs.)  
IT 104-15-4, p-Toluenesulfonic acid, uses 109-63-7, Boron trifluoride diethyl ether complex 4124-42-9, Ammonium p-toluenesulfonate 7646-78-8, Tin(IV) chloride, uses 7646-85-7, Zinc chloride, uses 7787-60-2, Bismuth chloride 88189-03-1  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of (meth)acryloyl-containing adamantane derivs. from vinyl  
(meth)acrylate and adamantyl alcs. or from (meth)acrylic acid and adamantyl alcs.)  
IT 279218-82-5P 569329-57-3P 569329-58-4P 569329-59-5P 569329-60-8P 569329-61-9P 569329-62-0P 569329-64-2P 569329-66-4P  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of (meth)acryloyl-containing adamantane derivs. from vinyl  
(meth)acrylate and adamantyl alcs. or from (meth)acrylic acid and adamantyl alcs.)  
IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions 700-57-2, 2-Adamantanol 702-98-7, 2-Methyl-2-adamantanol 768-95-6, 1-Adamantanol 770-71-8, 1-Adamantanemethanol 2177-18-6, Vinyl acrylate  
4245-37-8, Vinyl methacrylate 5001-18-3, 1,3-Dihydroxyadamantane 42459-51-8, 1-Adamantyl vinyl ether 124261-95-6, 2-Adamantyl vinyl ether 262617-15-2, 1-Adamantylmethyl vinyl ether 569329-63-1, 3-Methyl-1-adamantyl vinyl ether 569329-65-3, 1-Amino-2-adamantyl vinyl ether  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of (meth)acryloyl-containing adamantane derivs. from vinyl  
(meth)acrylate and adamantyl alcs. or from (meth)acrylic acid and adamantyl alcs.)

L12 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2003:391375 CAPLUS  
DN 139:149191  
ED Entered STN: 22 May 2003  
TI Synthesis of Allyl and Alkyl Vinyl Ethers Using an in Situ Prepared Air-Stable Palladium Catalyst. Efficient Transfer Vinylation of Primary, Secondary, and Tertiary Alcohols  
AU Bosch, Martin; Schlaf, Marcel  
CS Department of Chemistry and Biochemistry, Guelph-Waterloo Centre for Graduate Work in Chemistry (GWC)2, University of Guelph, Guelph, ON, N1G 2W1, Can.  
SO Journal of Organic Chemistry (2003), 68(13), 5225-5227  
CODEN: JOCEAH; ISSN: 0022-3263  
PB American Chemical Society  
DT Journal  
LA English  
CC 21-2 (General Organic Chemistry)

OS CASREACT 139:149191  
AB An air-stable palladium catalyst formed in situ from com. available components efficiently catalyzed the transfer vinylation between Bu vinyl ether and various allyl and alkyl alcs. to give the corresponding allyl and alkyl vinyl ethers in 61-98% yield in a single step.  
ST ether allyl alkyl vinyl prepn alc vinylation palladium catalyst  
IT Etherification  
Etherification catalysts  
Vinylation  
Vinylation catalysts  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT Alcohols, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT Ethers, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(vinyl; synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT 1662-01-7, 4,7-Diphenyl-1,10-phenanthroline 3375-31-3 42196-31-6, Palladium trifluoroacetate  
RL: CAT (Catalyst use); USES (Uses)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT 75-65-0, tert.-Butyl alcohol, reactions 78-70-6, Linalool 89-78-1, Menthol 96-41-3, Cyclopentanol 98-85-1, 1-Phenylethanol 100-51-6, Benzyl alcohol, reactions 107-18-6, Allyl alcohol, reactions 108-93-0, Cyclohexanol, reactions 556-82-1, 3-Methyl-2-buten-1-ol 629-11-8, 1,6-Hexanediol 768-95-6, 1-Adamantanol 821-09-0, 4-Penten-1-ol 822-67-3, 2-Cyclohexen-1-ol 3623-51-6, Neomenthol 3623-52-7, Isomenthol 18457-55-1, (S)-(-)-Perillyl alcohol 39161-19-8, 3-Penten-1-ol 308363-12-4, (R)-(-)-Carveol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT 111-34-2, Butyl vinyl ether 764-47-6, Propyl vinyl ether  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT 926-02-3P, tert.-Butyl vinyl ether  
RL: RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of primary, secondary, and tertiary alcs. using an in situ prepared air-stable palladium catalyst)  
IT 928-41-6P 935-04-6P, Benzyl vinyl ether 2100-16-5P, 1-Phenylethyl vinyl ether 2182-55-0P, Cyclohexyl vinyl ether 3917-15-5P, Allyl vinyl

FOR 10/553083 by Cynthia Hamilton

ether 5989-48-0P 19763-13-4P 42459-51-8P, 1-Adamantyl vinyl  
ether 80816-25-7P 176207-95-7P 193977-16-1P 193977-18-3P  
344329-17-5P 570432-56-3P 570432-57-4P 570432-58-5P 570432-59-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of allyl and alkyl vinyl ethers via transfer vinylation of  
primary, secondary, and tertiary alcs. using an in situ prepared  
air-stable palladium catalyst)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

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L12 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2003:172957 CAPLUS

DN 138:206865

ED Entered STN: 07 Mar 2003

TI Preparation of vinyl ether compounds using transition metal compound  
catalysts

IN Ishii, Yasutaka; Nakano, Tatsuya; Inoue, Keizo

PA Daicel Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07C049-453

ICS C07C041-16; C07C069-74; C07D315-00; C07D313-02; C07C069-00;  
C07C043-16

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1288186	A2	20030305	EP 2002-19088	20020828
	EP 1288186	A3	20030917		
	EP 1288186	B1	20070919		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	JP 2003073321	A	20030312	JP 2001-261632	20010830
	EP 1826196	A2	20070829	EP 2007-11396	20020828
	EP 1826196	A3	20071114		
	R: DE, FR, GB				
	US 2003083529	A1	20030501	US 2002-231115	20020830
	US 7074970	B2	20060711		
	US 2006205957	A1	20060914	US 2006-437616	20060522
	US 7271297	B2	20070918		
PRAI	JP 2001-261632	A	20010830		
	EP 2002-19088	A3	20020828		
	US 2002-231115	A3	20020830		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1288186	ICM	C07C049-453
	ICS	C07C041-16; C07C069-74; C07D315-00; C07D313-02; C07C069-00; C07C043-16

[I,A]

IPCI C07C0041-00 [I,C]; C07C0041-16 [I,A]; C07C0043-00 [I,C]; C07C0043-162 [I,A]; C07C0049-00 [I,C]; C07C0049-753 [I,A]; C07C0069-00 [I,C]; C07C0069-00 [I,A]; C07D0307-00 [I,C]; C07D0307-32 [I,A]; C07D0307-93 [I,A]; C07D0313-00 [I,C]; C07D0313-10 [I,A]

IPCR C07B0061-00 [I,C\*]; C07B0061-00 [I,A]; C07C0043-16 [I,A]; C07C0043-166 [I,A]; C07C0043-188 [I,A]; C07C0043-215 [I,A]; C07C0067-00 [I,C\*]; C07C0067-31 [I,A]; C07C0069-757 [I,A]; C07D0307-33 [I,A]; C07D0493-00 [I,C\*]; C07D0493-04 [I,A]

ECLA C07C041/16; C07C043/162; C07C049/753; C07C067/31+69/00J1; C07C069/00J1; C07D307/32C; C07D307/93; C07D313/10; C07C069/757; M07C

JP 2003073321 IPCR C07B0061-00 [I,C\*]; C07B0061-00 [I,A]; C07C0041-00 [I,C\*]; C07C0041-16 [I,A]; C07C0043-00 [I,C\*]; C07C0043-16 [I,A]; C07C0043-162 [I,A]; C07C0043-166 [I,A]; C07C0043-188 [I,A]; C07C0043-215 [I,A]; C07C0049-00 [I,C\*]; C07C0049-753 [I,A]; C07C0067-00 [I,C\*]; C07C0067-31 [I,A]; C07C0069-00 [I,C\*]; C07C0069-00 [I,A]; C07C0069-757 [I,A]; C07D0307-00 [I,C\*]; C07D0307-33 [I,A]; C07D0307-93 [I,A]; C07D0313-00 [I,C\*]; C07D0313-10 [I,A]; C07D0493-00 [I,C\*]; C07D0493-04 [I,A]

EP 1826196 IPCI C07C0069-00 [I,A]; C07C0049-753 [I,A]; C07C0049-00 [I,C\*]; C07C0043-162 [I,A]; C07C0043-00 [I,C\*]; C07D0307-32 [I,A]; C07D0307-93 [I,A]; C07D0307-00 [I,C\*]; C07D0313-10 [I,A]; C07D0313-00 [I,C\*]; C07C0069-757 [I,A]

ECLA C07C043/162; C07C049/753; C07C069/00J1; C07C069/757; C07D307/32C; C07D307/93; C07D313/10; M07C

US 2003083529 IPCI C07C0043-00 [I,A]

IPCR C07B0061-00 [I,C\*]; C07B0061-00 [I,A]; C07C0041-00 [I,C\*]; C07C0041-16 [I,A]; C07C0043-00 [I,C\*]; C07C0043-16 [I,A]; C07C0043-162 [I,A]; C07C0043-166 [I,A]; C07C0043-188 [I,A]; C07C0043-215 [I,A]; C07C0049-00 [I,C\*]; C07C0049-753 [I,A]; C07C0067-00 [I,C\*]; C07C0067-31 [I,A]; C07C0069-00 [I,C\*]; C07C0069-00 [I,A]; C07C0069-757 [I,A]; C07D0307-00 [I,C\*]; C07D0307-33 [I,A]; C07D0307-93 [I,A]; C07D0313-00 [I,C\*]; C07D0313-10 [I,A]; C07D0493-00 [I,C\*]; C07D0493-04 [I,A]

NCL 568/671.000

ECLA C07C041/16; C07C043/162; C07C049/753; C07C067/31+69/00J1; C07C069/00J1; C07D307/32C; C07D307/93; C07D313/10

US 2006205957 IPCI C07D0307-77 [I,A]; C07D0307-92 [I,A]; C07D0307-00 [I,C\*]; C07C0043-18 [I,A]; C07C0043-16 [I,A]; C07C0043-00 [I,C\*]; C07C0051-00 [I,A]

IPCR C07D0307-00 [I,C]; C07D0307-77 [I,A]; C07B0061-00 [I,C\*]; C07B0061-00 [I,A]; C07C0041-00 [I,C\*]; C07C0041-16 [I,A]; C07C0043-00 [I,C]; C07C0043-16 [I,A]; C07C0043-162 [I,A]; C07C0043-166 [I,A]; C07C0043-18 [I,A]; C07C0043-188 [I,A]; C07C0043-215 [I,A]; C07C0049-00 [I,C\*]; C07C0049-753 [I,A];

C07C0067-00 [I,C\*]; C07C0067-31 [I,A]; C07C0069-00 [I,C\*]; C07C0069-00 [I,A]; C07C0069-757 [I,A]; C07D0307-33 [I,A]; C07D0307-92 [I,A]; C07D0307-93 [I,A]; C07D0313-00 [I,C\*]; C07D0313-10 [I,A]; C07D0493-00 [I,C\*]; C07D0493-04 [I,A]

NCL 549/240.000; 568/665.000; 549/299.000; 549/306.000; 562/887.000

ECLA C07C041/16; C07C043/162; C07C049/753; C07C067/31+69/00J1; C07C069/00J1; C07D307/32C; C07D307/93; C07D313/10; C07C069/757; M07C

OS MARPAT 138:206865

AB The title process produces vinyl ether compds. and includes allowing a vinyl ester compound R1CO2CR2:CR3R4 wherein R1, R2, R3 and R4 are the same or different and are each a hydrogen atom or an organic group, to react with a hydroxy compound R5OH wherein R5 is an organic group, in the presence of at least one transition element compound to thereby yield a vinyl ether compound R5OCR2:CR3R4 wherein R2, R3, R4 and R5 have the same meanings as defined above. Such transition element compds. include iridium compds. and other compds. containing Group VIII elements.

ST vinyl ether prepn transition metal compd catalyst

IT Transition metal compounds

RL: CAT (Catalyst use); USES (Uses)

(preparation of vinyl ether compds. using transition metal compound catalysts)

IT Ethers, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(vinyl; preparation of vinyl ether compds. using transition metal compound catalysts)

IT 12080-32-9, Dichloro(1,5-cyclooctadiene)platinum 12092-47-6, Di- $\mu$ -chlorobis(1,5-cyclooctadiene)dirhodium 12112-67-3 32679-03-1, (1,5-Cyclooctadiene)bis(acetonitrile)iridium tetrafluoroborate 35138-23-9 50982-12-2, Dichloro(1,5-cyclooctadiene)ruthenium

RL: CAT (Catalyst use); USES (Uses)

(preparation of vinyl ether compds. using transition metal compound catalysts)

IT 765-12-8P, Triethylene glycol divinyl ether 766-94-9P, Phenyl vinyl ether 929-62-4P 929-72-6P, Triethylene glycol monovinyl ether 930-30-3P, 2-Cyclopenten-1-one 935-04-6P, Benzyl vinyl ether 2100-16-5P 6192-15-0P 19763-13-4P, 1,6-Bis(vinyloxy)hexane 27336-16-9P 42459-51-8P, 1-Adamantyl vinyl ether 46173-76-6P 52169-16-1P 88739-04-2P 406226-15-1P 424826-89-1P 500541-84-4P 500541-85-5P 500541-86-6P 500541-87-7P 500541-88-8P 500541-89-9P 500541-90-2P 500541-91-3P 500541-92-4P 500541-93-5P 500541-94-6P 500541-95-7P 500541-98-0P 500541-99-1P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of vinyl ether compds. using transition metal compound catalysts)

IT 98-85-1, sec-Phenethyl alcohol 100-51-6, Benzyl alcohol, reactions 108-05-4, Vinyl acetate, reactions 108-22-5, Isopropenyl acetate 108-95-2, Phenol, reactions 111-87-5, 1-Octanol, reactions 112-27-6,



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Triethylene glycol 629-11-8, 1,6-Hexanediol 768-95-6, 1-Adamantanol  
775-64-4 933-48-2 1490-04-6, Menthol 3212-60-0, 2-Cyclopenten-1-ol  
5001-18-3, 1,3-Adamantanediol 13416-69-8,  $\alpha$ -Hydroxy-  
 $\gamma,\gamma$ -dimethyl- $\gamma$ -butyrolactone 20098-14-0,  
4-Oxo-1-adamantanol 92343-46-9 96314-52-2, 1-Hydroxy-4-  
oxatricyclo[4.3.1.1<sup>3,8</sup>]undecan-5-one 99181-50-7, 1,3,5-Adamantanetriol  
421555-75-1 437754-44-4 500541-96-8 500541-97-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of vinyl ether compds. using transition metal compound  
catalysts)

L12 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:96169 CAPLUS

DN 136:279091

ED Entered STN: 06 Feb 2002

TI Development of a Highly Efficient Catalytic Method for Synthesis of Vinyl  
Ethers

AU Okimoto, Yoshio; Sakaguchi, Satoshi; Ishii, Yasutaka

CS Department of Applied Chemistry, Faculty of Engineering, Kansai  
University, Suita, Osaka, 564-8680, Japan

SO Journal of the American Chemical Society (2002), 124(8), 1590-1591

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 23-9 (Aliphatic Compounds)

OS CASREACT 136:279091

AB A new method for the preparation of alkyl vinyl ethers has been  
developed.

Thus, vinyl ethers ROCH:CH<sub>2</sub> (R = Octyl, PhCH<sub>2</sub>, PhCHMe, Menthyl,  
Adamant-1-yl, Ph) were synthesized by the reaction of alcs. with vinyl  
acetate under the influence of a catalytic amount of [Ir(cod)Cl]<sub>2</sub>

combined

with Na<sub>2</sub>CO<sub>3</sub> in good to excellent yields. Similarly, divinyl ethers, e.g.  
CH<sub>2</sub>:CHOCH<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>CH<sub>2</sub>OCH:CH<sub>2</sub> were also prepared from the corresponding

diols.

ST vinyl ether prepn; vinylation alc vinyl acetate iridium catalyst

IT Vinylation

Vinylation catalysts

(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.

with vinyl

acetate in the presence of inorg. sodium salts as additives)

IT Alcohols, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.

with vinyl

acetate in the presence of inorg. sodium salts as additives)

IT Ethers, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(vinyl; preparation of vinyl ethers via Ir-catalyzed vinylation of

alcs.

with vinyl acetate in the presence of inorg. sodium salts as  
additives)

IT 12112-67-3, Dichlorobiscyclooctadienediiridium 32679-03-1,

Bisacetonitrile(1,5-cyclooctadiene)iridium(1+) tetrafluoroborate

35138-23-9, Bis(1,5-cyclooctadiene)iridium(1+) tetrafluoroborate  
RL: CAT (Catalyst use); USES (Uses)  
(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.  
with vinyl  
acetate in the presence of inorg. sodium salts as additives)  
IT 80-05-7, Bisphenol-A, reactions 98-85-1, 1-Phenylethanol 100-51-6,  
Benzyl alcohol, reactions 108-05-4, Vinyl acetate, reactions  
108-95-2,  
Phenol, reactions 108-98-5, Thiophenol, reactions 111-87-5,  
1-Octanol,  
reactions 112-27-6, Bis-1,2-(2-hydroxyethoxy)ethane 123-31-9,  
1,4-Dihydroxybenzene, reactions 629-11-8, 1,6-Hexanediol 768-95-6,  
Adamantan-1-ol 769-78-8, Vinyl benzoate 1490-04-6, Menthol  
5001-18-3, 1,3-Adamantanediol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.  
with vinyl  
acetate in the presence of inorg. sodium salts as additives)  
IT 127-09-3, Sodium acetate 144-55-8, Sodium bicarbonate, reactions  
497-19-8, Sodium carbonate, reactions  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.  
with vinyl  
acetate in the presence of inorg. sodium salts as additives)  
IT 108-22-5P, Isopropenyl acetate 765-12-8P, Triethylene glycol divinyl  
ether 766-94-9P, Phenyl vinyl ether 935-04-6P, Benzyl vinyl ether  
1822-73-7P, Phenyl vinyl thioether 2100-16-5P, 1-Phenylethyl vinyl  
ether  
3754-60-7P, Bisphenol-A divinyl ether 4024-21-9P, 1,4-  
Bis(vinyloxy)benzene 19763-13-4P, 1,6-Bis(vinyloxy)hexane  
42459-51-8P, 1-Adamantyl vinyl ether 46173-76-6P 52169-16-1P  
406226-15-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of vinyl ethers via Ir-catalyzed vinylation of alcs.  
with vinyl  
acetate in the presence of inorg. sodium salts as additives)  
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L12 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1995:176654 CAPLUS

DN 122:55856

ED Entered STN: 09 Nov 1994

TI Improved enantioselectivity in the inverse electron demand Diels-Alder cycloadditions of 3-carbomethoxy-2-pyrone catalyzed by chiral ytterbium complexes

AU Marko, Istvan F.; Evans, Graham R.

CS Lab. Chim. Org., Univ. Catholique Louvain, Louvain-la-Neuve, B-1348, Belg.

SO Bulletin des Societes Chimiques Belges (1994), 103(5-6), 295-7  
CODEN: BSCBAG; ISSN: 0037-9646

DT Journal

LA English

CC 27-13 (Heterocyclic Compounds (One Hetero Atom))

OS CASREACT 122:55856

AB Yb(OTf)<sub>3</sub> (Tf = CF<sub>3</sub>SO<sub>2</sub>) in combination with (R)-(+)-Binol catalyzed the enantion selective inverse electron demand Diels Alder cycloaddn. reactions of 3-carbomethoxy-2-pyrone with vinyl ethers and vinyl sulfides.

ST stereochem Diels Alder carbomethoxypyrone catalyst; ytterbium triflate catalyst enantioselective Diels Alder; oxabicyclooctenone carbomethoxy alkoxy alkylthio

IT Diels-Alder reaction catalysts  
Stereochemistry

(chiral ytterbium catalyst for enantioselective inverse electron demand

Diels-Alder cycloaddns. of 3-carbomethoxy-2-pyrone)

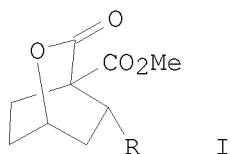
IT 18531-94-7, (R)-BINOL 54761-04-5, Ytterbium triflate

RL: CAT (Catalyst use); USES (Uses)

(chiral ytterbium catalyst for enantioselective inverse electron demand

FOR 10/553083 by Cynthia Hamilton

Diels-Alder cycloaddns. of 3-carbomethoxy-2-pyrone)  
IT 111-34-2, Butyl vinyl ether 1822-73-7, Phenyl vinyl sulfide  
2182-55-0,  
Cyclohexyl vinyl ether 4789-70-2, Butyl vinyl sulfide 25991-27-9  
42459-51-8, 1-Adamantyl vinyl ether  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chiral ytterbium catalyst for enantioselective inverse electron  
demand  
Diels-Alder cycloaddns. of 3-carbomethoxy-2-pyrone)  
IT 156899-10-4P 156899-11-5P 157007-16-4P 159951-54-9P 159951-55-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(chiral ytterbium catalyst for enantioselective inverse electron  
demand  
Diels-Alder cycloaddns. of 3-carbomethoxy-2-pyrone)  
L12 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1994:508443 CAPLUS  
DN 121:108443  
ED Entered STN: 03 Sep 1994  
TI Catalytic, enantioselective, inverse electron-demand Diels-Alder (IEDDA)  
reactions of 3-carbomethoxy-2-pyrone (3-CMP)  
AU Marko, Istvan E.; Evans, Graham R.  
CS Univ. Catholique Louvain, Dep. Chim., Louvain-La-Neuve, B-1348, Belg.  
SO Tetrahedron Letters (1994), 35(17), 2771-4  
CODEN: TELEAY; ISSN: 0040-4039  
DT Journal  
LA English  
CC 27-13 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 24  
OS CASREACT 121:108443  
GI



AB Cycloaddn. reactions between title pyrone and vinyl ethers and sulfides,  
catalyzed by the Yb(OTf)<sub>3</sub>-Binol complex, gave 70-97% bicyclic lactones I  
(R = e.g., EtO, EtS, PhCH<sub>2</sub>O, cymyloxy, adamantyloxy, PhS) in moderate to  
excellent enantiomeric excesses. Enantioselectivity increased with  
increasing substituent size in the vinyl ethers or sulfides.  
ST inverse electron demand Diels Alder pyrone; bicyclic lactone prepn  
enantioselectivity; substituent effect enantioselectivity bicyclic  
lactone  
prepn; vinyl ether Diels Alder pyrone enantioselectivity; sulfide vinyl  
Diels Alder pyrone enantioselectivity  
IT Diels-Alder reaction catalysts  
(inverse electron-demand, europium complexes with binol, for pyrone  
with vinyl ethers or sulfides, enantioselectivity of)

IT Substituent effect  
(on enantioselectivity of catalytic inverse electron-demand  
Diels-Alder  
cycloaddn. of pyrone with vinyl ethers or sulfides)  
IT Diels-Alder reaction  
(inverse-electron-demand, of pyrone with vinyl ethers or sulfides,  
enantioselectivity of)  
IT 18531-99-2  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst containing, for inverse electron-demand Diels-Alder  
cycloaddn. of  
vinyl ethers or sulfides with pyrone, enantioselectivity of)  
IT 54761-04-5  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for inverse electron-demand Diels-Alder cycloaddn. of vinyl  
ethers or sulfides with pyrone, enantioselectivity of)  
IT 25991-27-9, 3-Carbomethoxy-2-pyrone  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalytic inverse electron-demand Diels-Alder cycloaddn. with ethers  
and sulfides, enantioselectivity of)  
IT 109-92-2, Ethyl vinyl ether 111-34-2, Butyl vinyl ether 627-50-9,  
Ethyl vinyl sulfide 935-04-6, Benzyl vinyl ether 1191-99-7,  
2,3-Dihydrofuran 1822-73-7, Phenyl vinyl sulfide 1822-76-0, Benzyl  
vinyl sulfide 2182-55-0, Cyclohexyl vinyl ether 4789-70-2, Butyl  
vinyl  
sulfide 18888-48-7, Cyclohexyl vinyl sulfide 22881-48-7  
42459-51-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(catalytic inverse electron-demand Diels-Alder cycloaddn. with pyrone  
of, enantioselectivity of)  
IT 156724-93-5P 156724-94-6P 156724-95-7P 156724-96-8P 156724-97-9P  
156724-98-0P 156724-99-1P 156725-00-7P 156725-01-8P 156725-02-9P  
156725-03-0P 156725-04-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, by catalytic inverse electron-demand Diels-Alder  
cycloaddn.  
of pyrone with vinyl ethers or sulfides, enantioselectivity of)

L12 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1973:405820 CAPLUS  
DN 79:5820  
OREF 79:983a,986a  
ED Entered STN: 12 May 1984  
TI Synthesis and polymerization of vinyl esters and vinyl ethers having  
bulky  
substituents  
AU Nozakura, Shun-ichi; Okamoto, Takehiko; Toyora, Kunimitsu; Murahashi,  
Shunsuke  
CS Fac. Sci., Osaka Univ., Toyonaka, Japan  
SO Journal of Polymer Science, Polymer Chemistry Edition (1973), 11(5),  
1043-51  
CODEN: JPLCAT; ISSN: 0449-296X  
DT Journal  
LA English  
CC 35-6 (Synthetic High Polymers)

FOR 10/553083 by Cynthia Hamilton

AB The bulky adamantyl group in vinyl ester monomers favored the formation of syndiotactic polymers, whereas in the vinyl ether monomers it favored isotacticity when polymerized in nonpolar solvents. As open-chain models of vinyl adamantyl monomers, vinyl trialkylcarbinyl esters were prepared and polymerized to give syndiotactic polymers. Vinyl tripropylcarbinyl ether [40762-65-0] gave heterotactic polymer. Tacticities were determined from the ir spectra of poly(vinyl alc.) [9002-89-5] prepared by reduction of the polymers with LiAlH<sub>4</sub>.

ST polyvinyl adamantylcarboxylate tacticity; stereoregularity polyvinyl ester; ester isotacticity polyvinyl; adamantyl ether polymer tacticity; vinyl ether polymer tacticity

IT Polymerization (cationic and radical, of vinyl esters and ethers, tacticity in)

IT Tacticity (of vinyl ester and ether polymers, substituent effects on)

IT Substituent effect (on tacticity, of vinyl ester and ether polymers)

IT 16917-72-9P 40762-65-0P 42459-47-2P 42459-48-3P 42459-49-4P 42459-51-8P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

IT 26715-88-8 42439-69-0 42439-70-3 42439-71-4 42439-72-5 42439-73-6 42439-74-7  
RL: PRP (Properties) (tacticity of, determination of)

IT 74-86-2, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent) (vinylation by, of alcs.)

IT 2198-72-3 2819-03-6  
RL: RCT (Reactant); RACT (Reactant or reagent) (vinylation of, by acetylene)

=> d his

(FILE 'HOME' ENTERED AT 14:59:26 ON 14 FEB 2008)

FILE 'REGISTRY' ENTERED AT 14:59:37 ON 14 FEB 2008

L1 1 S 42459-51-8  
L2 3 S ADAMANTOL  
L3 564 S ADAMANT AND OL  
L4 564 S L3  
L5 0 S ADAMANT ADJ 1 ADJ OL  
L6 564 S ADAMANT AND OL  
L7 0 S C10H16O/MFW  
L8 5733 S C10H16O/MF  
L9 2 S L8 AND L6  
L10 1 S 768-95-6

FILE 'CAPLUS' ENTERED AT 15:03:21 ON 14 FEB 2008

L11 1659 S L10 OR L1

FOR 10/553083 by Cynthia Hamilton

L12 11 S L1

=> s l11 and ((chem? and ampli?) or positiv? or photo?)

2882437 CHEM?  
422323 AMPLI?  
123964 POSITIV?  
1552780 PHOTO?

L13 131 L11 AND ((CHEM? AND AMPLI?) OR POSITIV? OR PHOTO?)

=> s l13 and ( (POLYHYDROXYSTYRENE? OR POLY HYDROXYSTYRENE? OR POLY HYDROXY  
STYRENE? OR POLYHYDROXY STYRENE? OR POLYVINYLPHENOL? OR POLYVINYL PHENOL?  
OR POLY VINYL PHENOL? OR POLY VINYLPHENOL?))

1081 POLYHYDROXYSTYRENE?  
726508 POLY  
3434 HYDROXYSTYRENE?  
858 POLY HYDROXYSTYRENE?  
(POLY(W)HYDROXYSTYRENE?)  
726508 POLY  
466398 HYDROXY  
307853 STYRENE?  
24 POLY HYDROXY STYRENE?  
(POLY(W)HYDROXY(W)STYRENE?)  
7256 POLYHYDROXY  
307853 STYRENE?  
24 POLYHYDROXY STYRENE?  
(POLYHYDROXY(W)STYRENE?)  
919 POLYVINYLPHENOL?  
102645 POLYVINYL  
445745 PHENOL?  
188 POLYVINYL PHENOL?  
(POLYVINYL(W)PHENOL?)  
726508 POLY  
427568 VINYL  
445745 PHENOL?  
255 POLY VINYL PHENOL?  
(POLY(W)VINYL(W)PHENOL?)  
726508 POLY  
2991 VINYLPHENOL?  
845 POLY VINYLPHENOL?  
(POLY(W)VINYLPHENOL?)

L14 2 L13 AND ( (POLYHYDROXYSTYRENE? OR POLY HYDROXYSTYRENE? OR  
POLY  
HYDROXY STYRENE? OR POLYHYDROXY STYRENE? OR  
POLYVINYLPHENOL?  
OR POLYVINYL PHENOL? OR POLY VINYL PHENOL? OR POLY  
VINYLPHEN  
OL?))

=> d all 1-2

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2002:347843 CAPLUS  
DN 136:361825  
ED Entered STN: 09 May 2002  
TI Ionizing radiation-sensitive chemically amplified

negative-working resist compositions with high sensitivity and resolution,  
and their use  
IN Namiki, Takahisa; Yano, Akira; Kon, Junichi; Nozaki, Koji; Ozawa, Miwa  
PA Fujitsu Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-038

ICS C08K005-101; C08K005-1545; C08K005-42; C08K005-51; C08K005-52;  
C08L101-02; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002131909	A	20020509	JP 2000-322374	20001023
PRAI	JP 2000-322374		20001023		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002131909	ICM	G03F007-038
	ICS	C08K005-101; C08K005-1545; C08K005-42; C08K005-51; C08K005-52; C08L101-02; G03F007-004; H01L021-027
	IPCI	G03F0007-038 [ICM,7]; C08K0005-101 [ICS,7]; C08K0005-1545 [ICS,7]; C08K0005-42 [ICS,7]; [ICS,7]; C08K0005-52 [ICS,7]; C08K0005-00 [ICS,7,C*]; C08L0101-02 [ICS,7]; C08L0101-00 [ICS,7,C*]; G03F0007-004 [ICS,7]; H01L0021-027 [ICS,7];
C08K0005-51		
H01L0021-02		[ICS,7,C*]
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; C08K0005-00 [I,C*]; C08K0005-101 [I,A]; C08K0005-1545 [I,A]; C08K0005-42 [I,A]; C08K0005-51 [I,A]; C08K0005-52 [I,A]; C08L0101-00 [I,C*]; C08L0101-02 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]

OS MARPAT 136:361825

AB The compns. comprise (A) ionizing radiation-sensitive acid generators,  
(B)

alkali-soluble resist materials, which become alkali-insol. in the presence

of acids, and (C) additives forming free acid groups selected from carboxyl, sulfonic, and phosphoric acids by opening intramol. esters in the presence of alkali developing agents. The additives increase alkali-solubility of non-exposed areas.

ST neg photoresist phenolphthalein chem  
amplification sensitivity; ionizing radiation resist resoln alkali developing

IT Phenolic resins, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-, novolak; chemical amplified neg.



photoresists with high sensitivity and resolution using free acid group-forming additives)

IT Epoxy resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT Resists  
(neg.-working radiation-sensitive; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT Aminoplasts  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenolic, novolak; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 77-09-8, Phenolphthalein 143-74-8 2321-07-5  
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(additives forming free acid groups; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 76-09-5, Pinacol 108-78-1, Melamine, uses 768-95-6, 1-Adamantanol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkali-insolubilizing resist polymers with; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 54243-98-0P, Cresol-formaldehyde-melamine copolymer 420124-57-8P, Melamine-vinylphenol copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 9016-83-5, Cresol-formaldehyde copolymer 59269-51-1, Polyvinyl phenol  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1997:471370 CAPLUS  
DN 127:176770  
ED Entered STN: 26 Jul 1997  
TI Synthesis and dissolution characteristics of novel alicyclic polymers with monoacid ester structures  
AU Hattori, Takashi; Tsuchiya, Yuko; Yamanaka, Ryoko; Hattori, Keiko;

Shiraishi, Hiroshi  
CS Central Research Laboratory, Hitachi Ltd., Kokubunji, 185, Japan  
SO Journal of Photopolymer Science and Technology (1997), 10(4), 535-544  
CODEN: JSTEEW; ISSN: 0914-9244  
PB Technical Association of Photopolymers, Japan  
DT Journal  
LA English  
CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 36, 37  
AB Novel alicyclic polymers having monoacid ester structures were prepared  
by  
alcoholysis of non-conjugated cyclic diene and maleic anhydride  
copolymers. This polymer, named ALPHA, exhibited good solubility (10-50  
nm/s)  
in 0.113% aqueous tetramethyl-ammonium hydroxide solution without  
swelling.  
Absorbance was around 0.6  $\mu\text{m}^{-1}$  at 193 nm. Dry-etching resistance for  
Cl<sub>2</sub>/BCl<sub>3</sub> gas was the same as that of polyhydroxystyrene. A  
two-component resist system, consisting of 1-ethoxyethyl-protected ALPHA  
polymer and onium salt, produced 0.20- $\mu\text{m}$  line-and-space patterns using  
a KrF excimer laser stepper with a phase-shifting mask. ALPHA is  
suitable  
as a base polymer for ArF excimer laser resists.  
ST alicyclic polymer monoacid ester prepn dissoln; cyclic diene maleic  
anhydride copolymer alcoholysis; dry etching resistance alicyclic polymer  
ester; argon fluoride excimer laser resist  
IT Etching  
(dry-etching resistance of novel alicyclic polymers with monoacid  
ester  
structures under Cl<sub>2</sub>/BCl<sub>2</sub> gas conditions)  
IT Alcoholysis  
Polymerization  
(in synthesis of novel alicyclic polymers with monoacid ester  
structures)  
IT Dissolution rate  
Photoresists  
(synthesis and dissoln. characteristics of novel alicyclic polymers  
with monoacid ester structures)  
IT 7782-50-5, Chlorine, miscellaneous 13842-52-9, Boron dichloride  
RL: MSC (Miscellaneous)  
(dry-etching resistance of novel alicyclic polymers with monoacid  
ester  
structures under Cl<sub>2</sub>/BCl<sub>2</sub> gas conditions)  
IT 64-17-5DP, Ethanol, reaction products with cyclic diene-maleic anhydride  
copolymer, preparation 67-56-1DP, Methanol, reaction products with  
cyclic diene-maleic anhydride copolymer, preparation 67-63-0DP,  
2-Propanol, reaction products with cyclic diene-maleic anhydride  
copolymer, preparation 109-92-2DP, Ethyl vinyl ether, reaction products  
with cyclic diene-maleic anhydride copolymer 768-95-6DP,  
1-Adamantanol, reaction products with cyclic diene-maleic anhydride  
copolymer 4442-79-9DP, 2-Cyclohexylethanol, reaction products with  
cyclic diene-maleic anhydride copolymer 5240-72-2DP,  
Norbornane-2-methanol, reaction products with cyclic diene-maleic  
anhydride copolymer 25212-41-3DP, Cycloocta-1,5-diene-maleic anhydride  
copolymer, alc.-hydrolyzed 25212-41-3P, Cycloocta-1,5-diene-maleic

FOR 10/553083 by Cynthia Hamilton

anhydride copolymer 28132-01-6DP,  
4,8-Bis(hydroxymethyl)tricyclo[5.2.1.0  
2,6]decane, reaction products with cyclic diene-maleic anhydride  
copolymer  
30600-22-7DP, Maleic anhydride-5-methylenebicyclo[2.2.1]-2-heptene  
copolymer, alc.-hydrolyzed 30600-22-7P, Maleic anhydride-5-  
methylenebicyclo[2.2.1]-2-heptene copolymer 34011-82-0DP,  
5-Ethylenebicyclo[2.2.1]-2-heptene-maleic anhydride copolymer,  
alc.-hydrolyzed 34011-82-0P, 5-Ethylenebicyclo[2.2.1]-2-heptene-maleic  
anhydride copolymer 34149-10-5DP, Maleic  
anhydride-5-vinylbicyclo[2.2.1]-  
2-heptene copolymer, alc.-hydrolyzed 34149-10-5P, Maleic  
anhydride-5-vinylbicyclo[2.2.1]-2-heptene copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and dissoln. characteristics of novel alicyclic polymers  
with monoacid ester structures)

=> d his

(FILE 'HOME' ENTERED AT 14:59:26 ON 14 FEB 2008)

FILE 'REGISTRY' ENTERED AT 14:59:37 ON 14 FEB 2008

L1 1 S 42459-51-8  
L2 3 S ADAMANTOL  
L3 564 S ADAMANT AND OL  
L4 564 S L3  
L5 0 S ADAMANT ADJ 1 ADJ OL  
L6 564 S ADAMANT AND OL  
L7 0 S C10H16O/MFW  
L8 5733 S C10H16O/MF  
L9 2 S L8 AND L6  
L10 1 S 768-95-6

FILE 'CAPLUS' ENTERED AT 15:03:21 ON 14 FEB 2008

L11 1659 S L10 OR L1  
L12 11 S L1  
L13 131 S L11 AND ((CHEM? AND AMPLI?) OR POSITIV? OR PHOTO?)  
L14 2 S L13 AND ( (POLYHYDROXYSTYRENE? OR POLY HYDROXYSTYRENE? OR  
PO

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
88.27	174.19

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-10.40	-10.40

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NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAPLUS enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAPLUS enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAPLUS enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAPLUS coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAPLUS enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/CAPLUS enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS	29	JAN 02	STN pricing information for 2008 now available
NEWS	30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	31	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new

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custom IPC display formats  
NEWS 32 JAN 28 MARPAT searching enhanced  
NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days  
of publication  
NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment  
NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements  
NEWS 36 FEB 08 STN Express, Version 8.3, now available

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,  
AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2008

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NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 16:10:07 ON 14 FEB 2008

=> FILE REG

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 16:10:26 ON 14 FEB 2008  
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DICTIONARY FILE UPDATES: 13 FEB 2008 HIGHEST RN 1003293-96-6

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experimental property data in the original document. For information

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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> S 768-95-6  
L1 1 768-95-6  
(768-95-6/RN)

=> S 768-95-6/CRN  
L2 127 768-95-6/CRN

=> FILE CAPLUS	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	0.46	0.67

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=> S L1 OR L2  
1652 L1  
93 L2  
L3 1717 L1 OR L2

=> S L3 AND PHOTO?  
1552780 PHOTO?  
L4 130 L3 AND PHOTO?

=> S L3 AND CHEM? AND AMPLI?  
2882437 CHEM?  
422323 AMPLI?  
L5 7 L3 AND CHEM? AND AMPLI?

=> D ALL 1-7

FOR 10/553083 by Cynthia Hamilton

L5 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2007:593411 CAPLUS  
DN 147:42228  
ED Entered STN: 01 Jun 2007  
TI Salt suitable for an acid generator and a chemically  
amplified photoresist composition containing the same  
IN Yamaguchi, Satoshi; Harada, Yukako; Yoshida, Isao  
PA Sumitomo Chemical Company, Limited, Japan  
SO U.S. Pat. Appl. Publ., 35pp.  
CODEN: USXXCO  
DT Patent  
LA English  
INCL 430311000; 560150000; 558408000  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

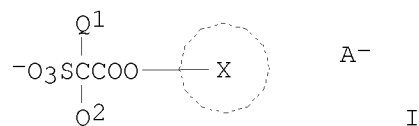
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2007122750	A1	20070531	US 2006-600884	20061117
	KR 2007053619	A	20070525	KR 2006-114104	20061117
	CN 1971421	A	20070530	CN 2006-10149463	20061117
	JP 2007161707	A	20070628	JP 2006-311244	20061117
PRAI	JP 2005-335361	A	20051121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2007122750	INCL	430311000; 560150000; 558408000
	IPCI	G03C0005-00 [I,A]; C07C0309-12 [I,A]; C07C0309-00 [I,C*]
	NCL	430/311.000; 560/150.000; 558/408.000
KR 2007053619	IPCI	C07C0309-65 [I,A]; C07C0309-74 [I,A]; C07C0309-00 [I,C*]; C07C0321-24 [I,A]; C07C0321-00 [I,C*]
CN 1971421	IPCI	G03F0007-039 [I,A]
JP 2007161707	IPCI	C07C0381-12 [I,A]; C07C0381-00 [I,C*]; G03F0007-004 [I,A]; C08L0101-02 [I,A]; C08L0101-00 [I,C*]; C08K0005-42 [I,A]; C08K0005-00 [I,C*]; C07C0309-17 [I,A]; C07C0309-00 [I,C*]; C07C0303-22 [I,A]; C07C0303-00 [I,C*]; C07D0333-46 [I,A]; C07D0333-00 [I,C*]; C07B0061-00 [N,A]
	FTERM	2H025/AA02; 2H025/AB16; 2H025/AC04; 2H025/AC08; 2H025/BE07; 2H025/BE10; 2H025/BG00; 2H025/CB14; 2H025/CB41; 2H025/FA17; 4H006/AA01; 4H006/AA02; 4H006/AA03; 4H006/AB81; 4H006/AC48; 4H006/BA52; 4H006/BA66; 4H006/BB12; 4H006/BB15; 4H006/BB17; 4H006/BB21; 4H039/CA66; 4H039/CD30; 4J002/BC041; 4J002/BG041; 4J002/BG051; 4J002/BH021; 4J002/BK002; 4J002/EV256; 4J002/FD206; 4J002/GP03

OS MARPAT 147:42228

GI



- AB The present invention provides a salt of the formula I: wherein ring X represents monocyclic or polycyclic hydrocarbon group having 3 to 30 carbon atoms, and one or more hydrogen atom in the monocyclic or polycyclic hydrocarbon group is optionally substituted with alkyl group having 1 to 10 carbon atom, alkoxy group having 1 to 10 carbon atom, perfluoroalkyl group having 1 to 4 carbon atoms, hydroxyalkyl group having 1 to 10 carbon atoms or cyano group; Q1 and Q2 each independently represent fluorine atom or perfluoroalkyl group having 1 to 6 carbon atoms; and A+ represents organic counter ion. The present invention also provides a chemical amplified resist composition comprising the salt of the formula I.
- ST photoacid generator chem amplified photoresist lithog
- IT Photoresists  
(salt of photoacid generator for chemical amplified resist)
- IT 19158-66-8P 938447-98-4P 938448-03-4P 938448-04-5P 938448-08-9P 938448-12-5P  
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(salt of photoacid generator for chemical amplified resist)
- IT 938448-02-3P 938448-06-7P 938448-07-8P 938448-10-3P 938448-11-4P 938448-14-7P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(salt of photoacid generator for chemical amplified resist)
- IT 912289-98-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
- RACT (Reactant or reagent)  
(salt of photoacid generator for chemical amplified resist)
- IT 938448-00-1P 938448-15-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(salt of photoacid generator for chemical amplified resist)
- IT 70-11-1 96-41-3, Cyclopentanol 108-93-0, Cyclohexanol, reactions 110-01-0 360-68-9 680-15-9 700-57-2, Tricyclo[3.3.1.1<sup>3,7</sup>]decan-2-ol 768-95-6, Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-ol 4270-70-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(salt of photoacid generator for chemical amplified resist)
- IT 258879-87-7  
RL: TEM (Technical or engineered material use); USES (Uses)



FOR 10/553083 by Cynthia Hamilton

(salt of photoacid generator for chemical amplified  
resist)

L5 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2006:485754 CAPLUS  
DN 144:477829  
ED Entered STN: 25 May 2006  
TI Fluorine-containing polymers, their preparation, and resist compositions  
therewith  
IN Yokokoji, Osamu; Sasaki, Takashi; Wang, Shu Zhong  
PA Asahi Glass Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 36 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 37

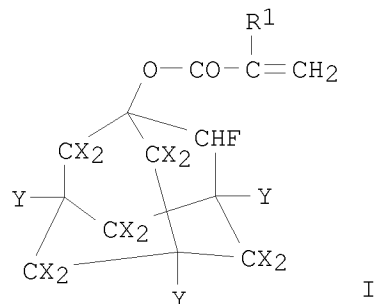
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006131879	A	20060525	JP 2005-208683	20050719
PRAI	JP 2004-291376	A	20041004		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006131879	IPCI	C08F0220-22 [I,A]; C08F0220-28 [I,A]; C08F0220-00 [I,C*]; G03F0007-039 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]
	FTERM	2H025/AA01; 2H025/AA02; 2H025/AB16; 2H025/AC04; 2H025/AC08; 2H025/AD03; 2H025/BE00; 2H025/BE10; 2H025/BG00; 2H025/CB14; 2H025/CB41; 2H025/CB45; 2H025/CC03; 2H025/FA10; 2H025/FA17; 4J100/AL03Q; 4J100/AL04Q; 4J100/AL08P; 4J100/AL08Q; 4J100/AL26P; 4J100/BA03P; 4J100/BA03Q; 4J100/BA05Q; 4J100/BB07P; 4J100/BB11P; 4J100/BB18P; 4J100/BB18Q; 4J100/BC03Q; 4J100/BC04Q; 4J100/BC07P; 4J100/BC07Q; 4J100/CA04; 4J100/JA38

GI



FOR 10/553083 by Cynthia Hamilton

AB The polymers are prepared from I (R1 = H, Me, F, CF3; Y = H, F, OH; X = H, F) and CH2:CR2CO2R3 [R2 = H, F, C≤3 (fluoro)alkyl; R3 = C≤20 monovalent organic group]. The photoresists contain the polymers, photoacid generators, and organic solvents.

ST photoresist hydroperfluoroadamantyl methacrylate polymer exposure light transparency; methacryloyloxyperfluoroadamantane butyrolactone methacrylate copolymer amplified photoresist functionality concn

IT Positive photoresists  
(chemical amplified; fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

IT 160823-54-1P 160823-55-2P 160823-57-4P 558482-16-9P 558482-17-0P  
558482-22-7P 849065-98-1P 872205-43-1P 872205-49-7P 872205-50-0P  
886845-85-8P 886845-86-9P 886845-87-0P 886845-88-1P 886845-89-2P  
886845-90-5P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)  
(fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

IT 886845-83-6P 886845-84-7P 886845-91-6P 886845-92-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

IT 677-84-9, Perfluoroisobutyryl fluoride 768-95-6,  
1-Hydroxyadamantane 5001-18-3, 1,3-Adamantanediol 99181-50-7,  
1,3,5-Adamantanetriol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

IT 872205-53-3P 872205-54-4P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)  
(monomers; fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

IT 66003-78-9, Triphenylsulfonium triflate  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(photoacid generators; fluoropolymers with high concentration of functional groups for resists transparent to lights over wide wavelength range)

L5 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2002:347843 CAPLUS  
DN 136:361825  
ED Entered STN: 09 May 2002  
TI Ionizing radiation-sensitive chemically amplified

negative-working resist compositions with high sensitivity and resolution,  
and their use  
IN Namiki, Takahisa; Yano, Akira; Kon, Junichi; Nozaki, Koji; Ozawa, Miwa  
PA Fujitsu Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-038

ICS C08K005-101; C08K005-1545; C08K005-42; C08K005-51; C08K005-52;  
C08L101-02; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002131909	A	20020509	JP 2000-322374	20001023
PRAI	JP 2000-322374		20001023		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002131909	ICM	G03F007-038
	ICS	C08K005-101; C08K005-1545; C08K005-42; C08K005-51; C08K005-52; C08L101-02; G03F007-004; H01L021-027
	IPCI	G03F0007-038 [ICM,7]; C08K0005-101 [ICS,7]; C08K0005-1545 [ICS,7]; C08K0005-42 [ICS,7]; [ICS,7]; C08K0005-52 [ICS,7]; C08K0005-00 [ICS,7,C*]; C08L0101-02 [ICS,7]; C08L0101-00 [ICS,7,C*]; G03F0007-004 [ICS,7]; H01L0021-027 [ICS,7];
C08K0005-51		
H01L0021-02		[ICS,7,C*]
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; C08K0005-00 [I,C*]; C08K0005-101 [I,A]; C08K0005-1545 [I,A]; C08K0005-42 [I,A]; C08K0005-51 [I,A]; C08K0005-52 [I,A]; C08L0101-00 [I,C*]; C08L0101-02 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]

OS MARPAT 136:361825

AB The compns. comprise (A) ionizing radiation-sensitive acid generators,  
(B)

alkali-soluble resist materials, which become alkali-insol. in the presence

of acids, and (C) additives forming free acid groups selected from carboxyl, sulfonic, and phosphoric acids by opening intramol. esters in the presence of alkali developing agents. The additives increase alkali-solubility of non-exposed areas.

ST neg photoresist phenolphthalein chem amplification

sensitivity; ionizing radiation resist resoln alkali developing

IT Phenolic resins, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-, novolak; chemical amplified neg. photoresists with high sensitivity and resolution using free acid

group-forming additives)

IT Epoxy resins, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT Resists  
(neg.-working radiation-sensitive; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT Aminoplasts  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(phenolic, novolak; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 77-09-8, Phenolphthalein 143-74-8 2321-07-5  
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(additives forming free acid groups; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 76-09-5, Pinacol 108-78-1, Melamine, uses 768-95-6, 1-Adamantanol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkali-insolubilizing resist polymers with; chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 54243-98-0P, Cresol-formaldehyde-melamine copolymer 420124-57-8P, Melamine-vinylphenol copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

IT 9016-83-5, Cresol-formaldehyde copolymer 59269-51-1, Polyvinyl phenol  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(chemical amplified neg. photoresists with high sensitivity and resolution using free acid group-forming additives)

L5 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 2000:451479 CAPLUS  
DN 134:86609  
ED Entered STN: 05 Jul 2000  
TI Novel design of carbon-rich polymers for 193 nm microlithography: adamantane-containing cyclopolymers  
AU Pasini, Dario; Low, Eric; Frechet, Jean M. J.  
CS Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA  
SO Advanced Materials (Weinheim, Germany) (2000), 12(5), 347-351  
CODEN: ADVMEW; ISSN: 0935-9648  
PB Wiley-VCH Verlag GmbH  
DT Journal

LA English  
CC 35-7 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 37, 74  
AB The design and synthesis of carbon-rich copolymers incorporating both  
ter-Bu esters as image able functionalities for chemical  
amplification, and adamantane moieties for etch resistance was  
described.  
ST adamantane deriv cyclopolymer nanolithog dry etching resistance  
IT Polymerization catalysts  
(cyclopolymer.; novel design of carbon-rich polymers for 193 nm  
microlithog.: adamantane-containing cyclopolymers)  
IT Resists  
(etching, dry; novel design of carbon-rich polymers for 193 nm  
microlithog.: adamantane-containing cyclopolymers)  
IT Lithography  
(nano-; novel design of carbon-rich polymers for 193 nm microlithog.:  
adamantane-containing cyclopolymers)  
IT 225783-63-1P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(cyclohexyl-containing; preparation of adamantane-containing  
cyclopolymers for 193  
nm microlithog.)  
IT 260357-33-3P 260357-34-4P 260357-35-5P 260357-36-6P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(cyclopolymer; preparation of adamantane-containing cyclopolymers for  
193 nm  
microlithog.)  
IT 78-67-1, 2,2'-Azobisisobutyronitrile  
RL: CAT (Catalyst use); USES (Uses)  
(cyclopolymer catalyst; novel design of carbon-rich polymers for 193 nm  
microlithog.: adamantane-containing cyclopolymers)  
IT 2589-57-3  
RL: CAT (Catalyst use); USES (Uses)  
(cyclopolymer catalyst; preparation of adamantane-containing  
cyclopolymers for  
193 nm microlithog.)  
IT 106-95-6, Allyl bromide, reactions 768-95-6, 1-Adamantanol  
1663-67-8, Malonyl dichloride 53913-96-5, tert-Butyl  
2-(Bromomethyl)acrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer synthesis; preparation of adamantane-containing  
cyclopolymers for 193  
nm microlithog.)  
IT 173614-51-2P 260357-31-1DP, t7  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer synthesis; preparation of adamantane-containing  
cyclopolymers for 193  
nm microlithog.)  
IT 225783-60-8P 260357-32-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer; preparation of adamantane-containing cyclopolymers for 193  
nm  
microlithog.)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1996:444777 CAPLUS

DN 125:208216

ED Entered STN: 27 Jul 1996

TI Effect of additives in ArF single layer chemical amplification photoresist

AU Suwa, Mitsuhito; Kajita, Toru; Iwanaga, Shin-Ichiro

CS Electronic Material Lab., Yokkaichi Res. Lab., Japan Synthetic Rubber Co.,

Ltd., Yokkaichi, 510, Japan

SO Journal of Photopolymer Science and Technology (1996), 9(3), 489-496  
CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

AB This paper describes a new approach to the design of pos.-tone ArF single layer chemical amplification (CA) photoresist. The main issue is the effect of small mol. compds. as additives in methacrylic-based ArF CA photoresist. Three alicyclic compds. with adamantyl moiety and two aromatic compds. with naphthyl moiety were selected as additives. Their influences on the photoresist properties were examined and clarified as follows: Transparency of the resist film at 193-nm could be controlled by the loading level and the sorts of additives. Alicyclic additives made the resist film more transparent. Both the photospeed and the contrast of the resist were drastically influenced by the loaded additives. Enhancement of the photospeed was easily achieved. Thermal properties of the resist film could also be affected by additives. However, the effect was generally temperate. The loaded additives could mitigate T-top formation of resist profile due to the control of the inherent dissoln. rate of the resist. Loading the additives would compensate some inherent defects of matrix acrylic polymers and consequently allow considerable latitude in resist design of ArF CA resist. A three component system comprising an acrylic polymer, a photoacid generator, and adamantanecarboxylic acid showed good imaging performance (0.26 $\mu$ mL/S, 35mJ/cm<sup>2</sup>) on KrF exposure.

ST adamantyl naphthyl additive chem amplification photoresist

IT Resists  
(photo-, effect of additives in ArF single layer chemical amplification photoresist)

IT 86-55-5, 1-Naphthoic acid 90-15-3, 1-Naphthol 768-95-6, 1-Adamantanol 828-51-3, 1-Adamantanecarboxylic acid 4942-47-6, 1-Adamantane acetic acid  
RL: MOA (Modifier or additive use); USES (Uses)  
(effect of additives in ArF single layer chemical amplification photoresist)

IT 72145-62-1, tert-Butyl methacrylate-Methacrylic acid-methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(effect of additives in ArF single layer chemical amplification photoresist)

IT 78-67-1, 2,2'-Azobisisobutyronitrile  
RL: TEM (Technical or engineered material use); USES (Uses)  
(initiator; effect of additives in ArF single layer chemical amplification photoresist)

IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 160481-39-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; effect of additives in ArF single layer chemical amplification photoresist)

L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1993:115738 CAPLUS  
DN 118:115738  
ED Entered STN: 19 Mar 1993  
TI Voltammetric study on a condensed monolayer of a long alkyl cyclodextrin derivative as a channel mimetic sensing membrane  
AU Odashima, Kazunori; Kotato, Minoru; Sugawara, Masao; Umezawa, Yoshio  
CS Fac. Sci., Hokkaido Univ., Sapporo, 060, Japan

SO Analytical Chemistry (1993), 65(7), 927-36  
CODEN: ANCHAM; ISSN: 0003-2700

DT Journal

LA English

CC 79-2 (Inorganic Analytical Chemistry)  
Section cross-reference(s): 66, 72, 80

AB For a fundamental study on the development of signal-amplifying chemical sensors that mimic biol. ion channels, a control of membrane permeability based on the blocking of an intramol. channel by host-guest complexation was studied for a condensed monolayer of a long alkyl derivative of  $\beta$ -cyclodextrin having a channel-like structure (6A, 6B, 6C, 6D, 6E, 6F, 6G-heptadeoxy-6A, 6B, 6C, 6D, 6E, 6F, 6G-heptakis(dodecylthio)- $\beta$ -cyclodextrin tetradecaacetate). To obtain exptl. evidence for such a mode of permeability control, an approach based on horizontal touch cyclic voltammetry was carried out for this condensed monolayer, which was formed at the air/H<sub>2</sub>O interface by applying a controlled high surface pressure to minimize the permeability through the intermol. voids between the membranous cyclodextrin mols. By comparing the permeabilities for 3 kinds of electroactive markers that differ in the steric bulkiness and/or hydrophobicity, rigid evidence was obtained for the ability of this cyclodextrin derivative to function as an intramol. channel. The permeability of this channel for a sterically permeable marker (p-quinone) is able to be controlled by blocking the channel with a guest mol. By using this condensed monolayer, the selectivity of permeability inhibition was examined for several organic guests. The mol. response ratio as a measure of signal transduction efficiency was up to 10.4.

ST signal amplifying chem sensor cyclodextrin membrane;  
long alkyl cyclodextrin deriv sensing membrane; dodecylthiocyclodextrin tetradecaacetate based sensing membrane

IT Sensors  
(chemical, condensed cyclodextrin derivative monolayer as channel mimetic sensing membrane, preparation and voltammetric study of)

IT Electrodes  
(membrane, channel mimetic, condensed cyclodextrin derivative monolayer as, preparation and voltammetric study of)

IT 110577-05-4  
RL: ANST (Analytical study)  
(condensed monolayer of, as channel mimetic sensing membrane, preparation and voltammetric study of)

IT 58-61-7, Adenosine, miscellaneous 65-46-3, Cytidine 100-51-6, Benzyl alcohol, miscellaneous 108-93-0, Cyclohexanol, miscellaneous 768-95-6, 1-Adamantanol  
RL: MSC (Miscellaneous)  
(guest, cyclic voltammogram area decrease of quinone in presence of condensed cyclodextrin derivative monolayer in relation to)

IT 106-51-4, p-Quinone, analysis 15317-76-7 17456-18-7, Tetrapotassium octacyanomolybdate



RL: ANST (Analytical study)  
(horizontal touch cyclic voltammetry of, using highly oriented  
pyrolytic graphite working electrode with/without condensed  
cyclodextrin derivative monolayer, comparison of)

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1990:97858 CAPLUS  
DN 112:97858  
ED Entered STN: 18 Mar 1990  
TI On the mechanism of the Gif and Gif-Orsay systems for the selective  
substitution of saturated hydrocarbons  
AU Barton, Derek H. R.; Halley, Frank; Ozbalik, Nubar; Young, Esme;  
Balavoine, Gilbert; Gref, Auroro; Boivin, Jean  
CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA  
SO New Journal of Chemistry (1989), 13(3), 177-82  
CODEN: NJCHE5; ISSN: 1144-0546  
DT Journal  
LA English  
CC 22-7 (Physical Organic Chemistry)  
Section cross-reference(s): 29  
OS CASREACT 112:97858  
AB The usual chemoselective behavior of the Gif and Gif-Orsay  
systems for the selective oxidation of saturated hydrocarbons is briefly  
reviewed. The Gif system also phenylselenates saturated hydrocarbons,  
using  
iron powder as reductant with di-Ph diselenide and oxygen as reactants.  
Recent studies have confirmed the role of the iron-carbon  $\sigma$ -bond and  
have shown that the reactive species is a Fev-oxenoid. The mechanism  
originally proposed can now be amplified.  
ST Gif system mechanism; substitution satd hydrocarbon Gif Orsay  
IT Oxidation catalysts  
Redox reaction catalysts  
(homogeneous iron based, for saturated hydrocarbons and Gif system,  
mechanism with)  
IT Alcohols, preparation  
Ketones, preparation  
RL: PREP (Preparation)  
(in Gif and Gif-Orsay systems, mechanism of)  
IT Regiochemistry  
(of Gif type oxidns. of adamantane)  
IT Substitution reaction  
(of saturated hydrocarbons in Gif and Gif-Orsay systems, mechanism of)  
IT Oxidation  
Redox reaction  
(of saturated hydrocarbons in Gif system, mechanism of)  
IT Solvent effect  
(on Gif oxidns.)  
IT Cycloalkanes  
Hydrocarbons, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, in Gif and Gif-Orsay systems, mechanism of)  
IT Oxidation, electrochemical  
(Gif-Orsay, of saturated hydrocarbon, mechanism of)  
IT Bond formation  
(carbon-iron,  $\sigma$ , in Gif systems)

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IT Redox reaction  
(electrochem., Gif-Orsay, of saturated hydrocarbon, mechanism of)

IT Oxidation catalysts  
Redox reaction catalysts  
(electrochem., iron based, for saturated hydrocarbons in Gif-Orsay system,  
mechanism with)

IT 64-19-7P, Acetic acid, preparation 110-86-1P, Pyridine, preparation  
RL: PREP (Preparation)  
(Gif oxidns. in presence of, mechanism of)

IT 7705-08-0, Ferric chloride, uses and miscellaneous 15138-92-8  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for Gif systems, mechanism with)

IT 108-93-0P, Cyclohexanol, preparation 700-57-2P, 2-Adamantanol  
700-58-3P, Adamantanone 768-95-6P, 1-Adamantanol  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in Gif system, catalysts for)

IT 108-94-1P, Cyclohexanone, preparation  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, in Gif type oxidns., catalysts for)

IT 10058-23-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation by, of saturated alkanes in Gif type system, mechanism with)

IT 7722-84-1, Hydrogen peroxide, reactions 12030-88-5, Potassium superoxide  
13718-66-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation by, of saturated hydrocarbons in Gif type systems, mechanism with)

IT 7646-93-7  
RL: PRP (Properties)  
(oxidation of saturated hydrocarbons in Gif type system containing, mechanism with)

IT 7778-80-5, Potassium sulfate, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of saturated hydrocarbons in Gif type system containing, mechanism with)

IT 281-23-2, Adamantane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, by Gif type systems, mechanism and regioselectivity of)

IT 110-82-7, Cyclohexane, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of, in Gif type systems, mechanism of)

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

30.21

30.88

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

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(FILE 'HOME' ENTERED AT 16:10:07 ON 14 FEB 2008)

FILE 'REGISTRY' ENTERED AT 16:10:26 ON 14 FEB 2008

L1 1 S 768-95-6  
L2 127 S 768-95-6/CRN

FILE 'CAPLUS' ENTERED AT 16:10:54 ON 14 FEB 2008

L3 1717 S L1 OR L2  
L4 130 S L3 AND PHOTO?  
L5 7 S L3 AND CHEM? AND AMPLI?

FILE 'STNGUIDE' ENTERED AT 16:12:00 ON 14 FEB 2008

=> S L4 NOT L5

'CRN' IS NOT A VALID FIELD CODE

0 768  
1 95  
71 6  
0 768-95-6  
(768(W)95(W)6)  
0 768-95-6/CRN  
9 PHOTO?  
0 768  
1 95  
71 6  
0 768-95-6  
(768(W)95(W)6)  
0 768-95-6/CRN  
146 CHEM?  
0 AMPLI?

L6 0 L4 NOT L5

=> S L4 NOT L5

'CRN' IS NOT A VALID FIELD CODE

0 768  
1 95  
71 6  
0 768-95-6  
(768(W)95(W)6)  
0 768-95-6/CRN  
9 PHOTO?  
0 768  
1 95  
71 6

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```

      0 768-95-6
        (768(W)95(W)6)
      0 768-95-6/CRN
146 CHEM?
      0 AMPLI?
L7      0 L4 NOT L5
```

```
=> S L4 NOT CHEM? AMPLI?
'CRN' IS NOT A VALID FIELD CODE
      0 768
      1 95
      71 6
      0 768-95-6
        (768(W)95(W)6)
      0 768-95-6/CRN
      9 PHOTO?
146 CHEM?
      0 AMPLI?
      0 CHEM? AMPLI?
        (CHEM?(W)AMPLI?)
L8      0 L4 NOT CHEM? AMPLI?
```

```
=> S L4 NOT CHEM? AND AMPLI?
'CRN' IS NOT A VALID FIELD CODE
      0 768
      1 95
      71 6
      0 768-95-6
        (768(W)95(W)6)
      0 768-95-6/CRN
      9 PHOTO?
146 CHEM?
      0 AMPLI?
L9      0 L4 NOT CHEM? AND AMPLI?
```

=> D HIS

(FILE 'HOME' ENTERED AT 16:10:07 ON 14 FEB 2008)

```

FILE 'REGISTRY' ENTERED AT 16:10:26 ON 14 FEB 2008
L1      1 S 768-95-6
L2      127 S 768-95-6/CRN
```

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FILE 'CAPLUS' ENTERED AT 16:10:54 ON 14 FEB 2008
L3      1717 S L1 OR L2
L4      130 S L3 AND PHOTO?
L5      7 S L3 AND CHEM? AND AMPLI?
```

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FILE 'STNGUIDE' ENTERED AT 16:12:00 ON 14 FEB 2008
L6      0 S L4 NOT L5
L7      0 S L4 NOT L5
L8      0 S L4 NOT CHEM? AMPLI?
L9      0 S L4 NOT CHEM? AND AMPLI?
```

=> FILE CAPLUS

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.12	31.00
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-5.60

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FILE LAST UPDATED: 13 Feb 2008 (20080213/ED)

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=> S L4  
1552780 PHOTO?  
L10 130 L3 AND PHOTO?  
  
=> S L4 NOT L5  
L11 126 L4 NOT L5  
  
=> S L11 AND (ACETAL OR KETAL)  
51030 ACETAL  
10150 KETAL  
L12 1 L11 AND (ACETAL OR KETAL)  
  
=> D

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1992:20491 CAPLUS  
DN 116:20491  
TI Photochemistry of phenyl thioethers and phenyl selenoethers.  
Radical vs. ionic behavior  
AU Kropp, Paul J.; Fryxell, Glen E.; Tubergen, Mark W.; Hager, Michael W.;  
Harris, G. Davis, Jr.; McDermott, T. Paul, Jr.; Tornero-Velez, Rogelio  
CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27599-3290, USA  
SO Journal of the American Chemical Society (1991), 113(19), 7300-10

FOR 10/553083 by Cynthia Hamilton

CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA English  
OS CASREACT 116:20491

=> D ALL

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1992:20491 CAPLUS

DN 116:20491

ED Entered STN: 24 Jan 1992

TI Photochemistry of phenyl thioethers and phenyl selenoethers.  
Radical vs. ionic behavior

AU Kropp, Paul J.; Fryxell, Glen E.; Tubergen, Mark W.; Hager, Michael W.;  
Harris, G. Davis, Jr.; McDermott, T. Paul, Jr.; Tornero-Velez, Rogelio

CS Dep. Chem., Univ. North Carolina, Chapel Hill, NC, 27599-3290, USA

SO Journal of the American Chemical Society (1991), 113(19), 7300-10

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

CC 22-4 (Physical Organic Chemistry)

OS CASREACT 116:20491

AB Ph thio- and Ph selenoethers displayed competing radical and ionic  
photobehavior on irradiation in solution, via a mechanism thought to  
involve initial homolytic cleavage of the alkyl C-S or C-Se bond followed  
by electron transfer within the resulting radical pair cage. These are  
the first examples of ionic photobehavior to be recognized for  
the C-SAr and C-SeAr chromophores. The electronegatively substituted  
pentafluorophenyl analogs displayed enhanced ionic photobehavior  
. By contrast, a 4-methoxyphenyl derivative exhibited almost exclusively  
radical behavior. A sulfoxide displayed principally radical behavior,  
accompanied by epimerization at sulfur. The quantum yields for the  
disappearance of the 2-norbornyl thioethers were 0.53-0.64 in solution

and

rose to 0.89-0.95 in the presence of suspended fumed silica, which  
involved nucleophilic trapping by surface silanol groups to afford  
covalently bound material that afforded a chloride on treatment with  
SOCl<sub>2</sub>. Irradiation of Ph thioethers, Ph selenoether or C<sub>6</sub>H<sub>5</sub>SH in allyl

alc.

solution afforded an acetal, apparently via isomerization of some  
of the solvent to a propanal followed by acetalization. Irradiation of

alc.

solns. of aldehydes containing C<sub>6</sub>H<sub>5</sub>SH is a useful means of generating  
acetals

under neutral conditions.

ST thioether phenyl photochem radical mechanism; selenoether phenyl  
photolysis ionic mechanism

IT Sulfides, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(Ph, photolysis of, ionic vs. radical mechanism of)

IT Photolysis

(of Ph thio- or selenoethers, ionic vs. radical mechanism of)

IT Substituent effect

(on photolysis mechanism of Ph thio- or selenoethers)

- IT Solvent effect  
(on photolysis of Ph thio- or selenoethers)
- IT Acetals  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(photochem. preparation of, under neutral conditions)
- IT Ethers, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Ph, seleno, photolysis of, ionic vs. radical mechanism of)
- IT Electron exchange and Charge transfer  
(photochem., in photolysis of Ph thio- or selenoethers)
- IT 1666-13-3, Diphenyl diselenide  
RL: PROC (Process)  
(conversion of, to Ph selenotricyclodecane)
- IT 110-87-2  
RL: PROC (Process)  
(conversion of, to Ph tetrahydropyranyl sulfide)
- IT 25139-43-9  
RL: PROC (Process)  
(conversion of, to Ph thioether derivs.)
- IT 628-92-2, Cycloheptene 768-95-6, Tricyclo[3.3.1.1<sup>3</sup>,7]decan-1-ol  
2534-77-2 132802-42-7  
RL: PROC (Process)  
(conversion of, to Ph thioethers)
- IT 696-63-9, 4-Methoxythiophenol 2973-86-6  
RL: PROC (Process)  
(conversion of, to norbornylphenyl sulfide derivative)
- IT 34837-55-3, Benzeneselenenyl bromide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with bromonorbornane in presence of magnesium)
- IT 7631-86-9, Silica, uses  
RL: PRP (Properties)  
(effect of, on photolysis of Ph tetrahydropyranyl sulfide in presence allyl alc.)
- IT 67-56-1, Methanol, reactions 107-18-6, Allyl alcohol, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photochem. reaction of, with Ph thioethers, mechanism of)
- IT 58652-54-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and conversion of, to Ph thioethers)
- IT 24584-22-3P 41327-09-7P 135394-86-4P 135394-87-5P 135394-88-6P  
135394-89-7P 135501-25-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and photolysis of)
- IT 20965-36-0P 75480-69-2P 88459-01-2P 128337-02-0P 135394-82-0P  
135394-84-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and photolysis of, mechanism of)
- IT 123-38-6P, Propanal, preparation 142-68-7P 279-19-6P,  
Tricyclo[2.2.1.0<sup>2</sup>,6]heptane 279-23-2P, Bicyclo[2.2.1]heptane  
281-23-2P, Tricyclo[3.3.1.1<sup>3</sup>,7]decane 765-91-3P 780-68-7P  
3732-31-8P, 1,1'-Bitricyclo[3.3.1.1<sup>3</sup>,7]decane 4203-49-0P 6221-74-5P  
6581-66-4P 10395-53-6P 10501-16-3P 18947-78-9P, 2,2'-

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Bibicyclo[2.2.1]heptane 19066-23-0P 20615-53-6P 24536-40-1P,  
3-(Phenylthio)-1-propanol 135394-83-1P 135394-85-3P 135394-90-0P  
135501-26-7P 135501-27-8P 135501-28-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 108-98-5, Thiophenol, reactions 771-62-0, Pentafluorothiophenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with adamantyltosylate)  
IT 106-95-6, 3-Bromopropene, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with tricyclodecanol, propenyloxytricyclodecane by)

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
11.32	42.32

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.80	-6.40

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